REMARKS

Claims 5-25 were considered in the Office Action. In this paper, Claims 5, 12, and 19 have been amended. No claims have been canceled. Claims 26-35 have been added. No new matter has been added by this amendment.

Applicant thanks the Examiner for withdrawing the previous double patenting rejection, the rejection under 35 U.S.C. § 112, and the objections to the claims.

Amendments to the Specification

Applicant has amended the Specification to recite an "infinite radius of curvature." Applicant respectfully submits that support for this amendment can be found in the originally-filed application at Claim 2. Thus, Applicant submits that no new matter has been added by this amendment.

Responses to Arguments

Section 6 of the Office Action

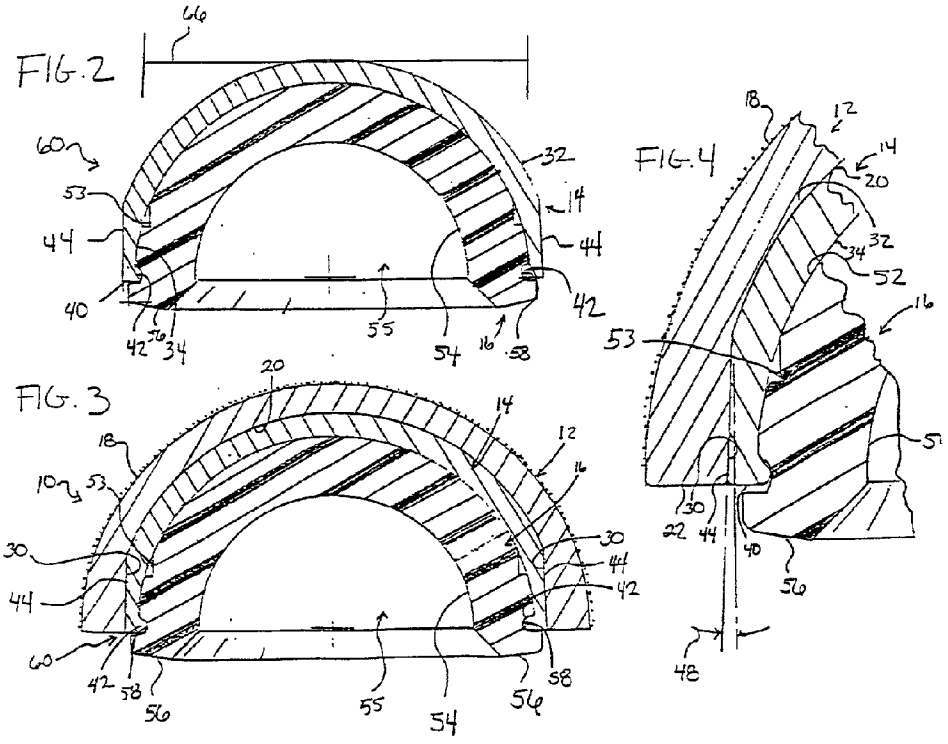
First, the Office Action responds to Applicant's previous arguments "that Serbousek's liner 14 and shell 12 do not contact in the spherical region." The then pending claims recited "a spherical outer surface… configured to… contact the inner surface." In Applicant's previous response, Applicant showed that such contact in a spherical region is not taught by Serbousek.

The Office Action now argues that Serbousek implies contact in the spherical region for two reasons: (1) Figures 2-4 appear to show such contact and (2) paragraph [0039] says there is no "relative movement." Here, the Office Action attempts to take Official Notice of matter that is not "capable of instant and unquestionable demonstration", as expressly required by § 2144.03(A) of the MPEP. Applicant notes that, "[a]ssertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art." MPEP § 2144.03(A). Thus, the Office Action's apparent attempt to officially notice is improper as a matter of law.

Proper use of Official Notice requires compliance with several obligations expressly set forth in the Manual of Patent Examining Procedure. The Office Action has failed to meet these

obligations. Specifically, the Office has failed to satisfy its obligations under MPEP § 2144.03. MPEP § 2144.03(B), for example, expressly requires the Office to provide specific factual findings predicated on sound technical and scientific reasoning to support taking Official Notice. The MPEP goes on to explain that this means that the Office should present an Applicant with the explicit basis on which Official Notice is based so that the Applicant is able to challenge the assertion in the next reply after the Office action. MPEP § 2144.03(B). Naked assertions about what is allegedly known in the art, like those noted, cannot satisfy these requirements. In sum, the Office Action's apparent assertion of Official Notice is improper and traversed.

First addressing the Office Action's second argument, (2), the lack of "relative movement" is irrelevant. For example, as Applicant argues to be the case, if there is locking at the non-spherical tapers 30, 44 of Serbousek (Figures 3, 4, below) then relative movement can be prevented without contact in the spherical region. Thus, the lack of relative movement does not "unquestionably demonstrate" contact in the spherical regions.

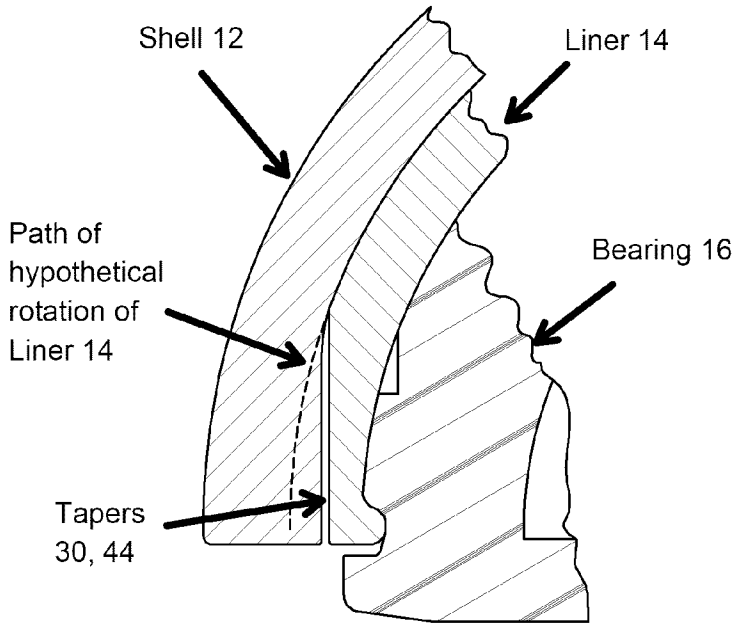


The Office Action also implicitly argues that the lack of a visual gap in Figures 2-4 (depicted above) unquestionably demonstrates that none exists. Applicant respectfully submits that the lack of a visible gap does not imply that none exists, and further that the nature of the locking mechanism described in Serbousek positively indicates that there should be a gap.

First, Applicant notes that the "female and male tapers 30, 44 cooperate to hold subassembly 60 [including the liner 14 and bearing 16] in place [within the shell 12]." Serbousek at [0034]. Because these tapers 30, 44 lock the subassembly 60 in place, once they come into contact further relative movement is prevented. Thus, if the tapers come into contact prior to the spherical regions, there can be no contact in the spherical regions because further relative movement into contact is prevented.

Alternatively, if the spherical regions come into contact prior to the tapers there can be no contact along the tapers, much less a locking contact. To show this even more clearly, we now exhaustively consider each possible motion of the subassembly 60 relative to the shell 12 that maintains said hypothetical contact in the spherical regions. Clearly, after contact in the spherical regions further translation of the subassembly 60 deeper into the shell 12 is prevented by the contact between the subassembly and shell. Additionally, translation of the subassembly 60 away from the shell removes the pair from contact. Thus, we need only consider rotation. The subassembly 60 and the shell 12 of Serbousek appear to be rotationally symmetric and are described as having spherical elements. Thus, rotation about the associated axis of symmetry has no real effect, because it is symmetric.

The modified Figure 4, below, shows that rotations not about the axis of symmetry are prevented by the tapered portions 30, 44. In the modified Figure 4, the liner 14 and shell 12 are in contact in their spherical regions such that relative rotation or tilting between them must be along an arc-shaped extension of said spherical surfaces. Such an arc is shown in the modified Figure 4 as a path of hypothetical rotation. As shown, this path leads the liner 14 **through** the shell 12, which cannot happen because the shell is solid. Thus, if contact in the spherical regions occurs, the only possible relative movement that maintains contact is rotation about the axis of symmetry. However, the subassembly is symmetric about that axis, so such rotation about the axis of symmetry does not change which surfaces are in contact. Therefore, if the spherical regions come into contact prior to the tapers, further relative movement is prevented and the tapers cannot come into contact (locking contact, or otherwise).



In view of the previous paragraphs, the tapers and the spherical regions can both come into contact **only if** they do so simultaneously. This is highly unlikely for two reasons. First, such simultaneous contact would require near perfect precision in the shaping of the liner 14 and shell 12, i.e. that the inner surface of the shell 12 and the outer surface of the liner 14 have exactly the same shape both in the spherical regions and at the tapers. Second, such simultaneous contact could reduce the locking force between the tapers. For example, if there is a slight error causing the spherical regions to contact first, further motion would be prevented such that the tapers would not proceed to contact and the shell and liner would not lock together. Thus, to ensure functionality and locking, the liner 14 and shell 12 a person of ordinary skill in the art would understand that Serbousek's liner 14 and shell 12 would be sized such that the tapers contact before the spherical regions. Because contact at the tapers locks the shell 12 to the liner 14, further motion is prevented such that the spherical regions do not proceed into contact.

Section 7 of the Office Action

Next, the Office Action recites: "However, Serbousek discloses the claimed invention, despite possible manufacture [*sic*] difficulties." Here the Office Action appears to argue that, despite the difficulty of such perfect precision required for simultaneous contact between the tapers and spherical regions (discussed above), the drawings nevertheless disclose contact in the

spherical region. However, the MPEP makes clear that when the reference is silent on certain details shown in the drawings (e.g., contact in the spherical regions), the drawings must be interpreted as they would be understood by one of ordinary skill in the art. MPEP § 2125. Thus, the lack of a visible gap in drawings cannot be blindly trusted; the functionality of the disclosed assembly must still be considered.

Section 8 of the Office Action

Finally, the Office Action "notes that in the liner 14/16 (60) and shell 12 of Serbousek the line of contact is surrounded by and intersects the spherical outer surface' (at the very lest at a point during a moment in time) (figures 2-4)." Applicant respectfully submits that this argument from the Office Action is unclear. First, the Office Action provides no indication of where this **line** of contact is in Serbousek. Indeed, as Applicant discusses herein, a person of ordinary skill in the art would find no contact in the spherical region of Serbousek. Second, Applicant does not understand the relevance of "at a point during a moment in time. (figures 2-4)." Figures 2-4 depict a static assembly so time is irrelevant.

Rejection of the Claims Under 35 U.S.C. §§ 102, 103

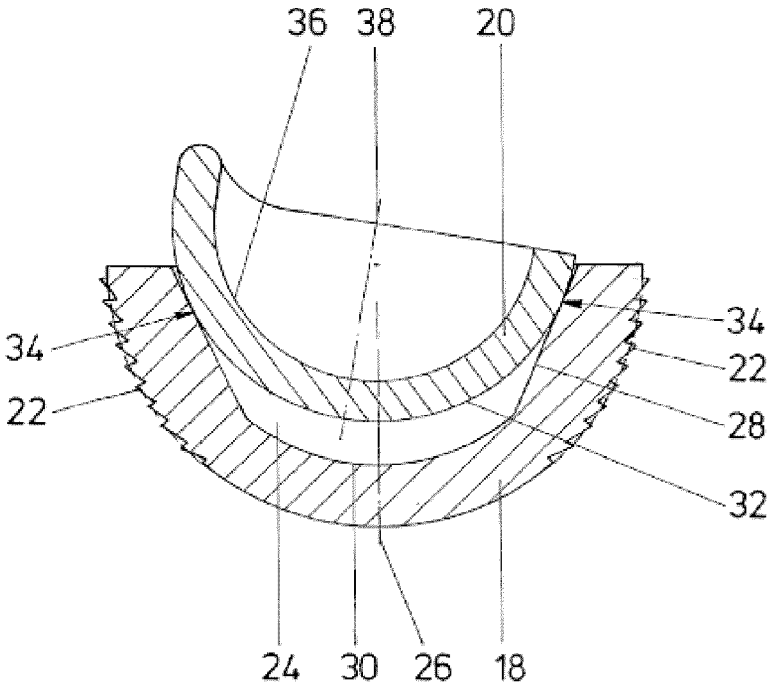
All of the claims stand rejected under 35 U.S.C. §§ 102, 103 in view of at least Serbousek (U.S. Pat. App. Pub. No. 2002/0068980). Serbousek discloses a prosthetic cup assembly, as discussed previously and above.

Applicant respectfully traverses the rejections in view of Serbousek for at least the reasons discussed above. Nevertheless, Applicant has amended independent Claim 5 solely to clarify the reading of the claim.

Independent Claim 5 now recites, among other things, "a line of contact that is concentric with the axis of rotation of the accommodating space of the socket shell, the line of contact being surrounded by and intersecting the spherical outer surface of the socket insert, the socket insert coupleable in a self-locking manner within said accommodating space along said line of contact" wherein "a radius of curvature of the taper of the inner surface of the socket shell in the region of said line of contact is greater than the spherical radius of the outer surface of said socket insert."

A non-limiting embodiment of a joint socket on which amended claim 5 reads is illustrated in Figure 2 of the pending application (reproduced below). As shown, a conical inner surface 28 of the shell 18 contacts a spherical outer surface 32 of a socket insert 20 along a line of contact 34. The linear taper of the conical inner surface 28 of the shell 18 has an infinite radius of curvature (e.g., a surface with infinite radius has a linear profile). This radius of curvature, being infinite, is greater than the finite radius of the spherical outer surface 32 of the socket insert 20. Further, the spherical surface seated to a conical surface creates a line of contact concentric with their axes of rotation.

FIG 2



Page 4 of the Office Action appears to indicate that the tapering portion of the Serbousek's shell 12 corresponds with the inner surface of the socket shell recited in Claim 5, and that the spherical portion of Serbousek's liner 14 corresponds with the recited outer surface. However, as discussed above, the Office Action has not established that the taper of Serbousek's shell 12 contacts the spherical portion of Serbousek's liner 14, much less that the liner 14 couples to the shell 12 in a self-locking manner along said line of contact. Further, the Office Action has not established that any such line of contact "is surrounded by and **intersects** the spherical outer

surface," as recited, among other features, in amended claim 5, much less identified where Serbousek discloses such a concentric line of contact.

For at least these reasons, Applicant respectfully submits that Serbousek does not teach all of the features of amended Claim 5, so that amended Claim 5 is allowable over Serbousek. Claims 6-10 and 12-18[1] depend from amended Claim 5 and are therefore likewise allowable over Serbousek, not only because they depend from an allowable base claim, but also because each of these claims recites a unique combination of features, not taught or suggested by the cited art.

For example, amended Claim 12 recites "free rotation and tilting of the insert in the socket shell when the insert and shell are in contact with each other along said line of contact." Modified Figure 4 above indicates how such free tilting is not allowed by Serbousek. Applicant acknowledges the language in paragraph [0040] of Serbousek cited by the Office Action, but respectfully submits that such changes in orientation appear to relate to embodiments such as that in Figure 5 of Serbousek. As shown in Figure 5, the different orientation requires a distinctly shaped liner 14.

As an additional example, Applicant respectfully notes that the rejections of Claims 6 and 21 do not set forth a prima facie case of anticipation. The Office Action recites that "the area of contact defines an infinite radius of curvature because it is circular." Applicant respectfully submits that this argument appears to contradict itself, since an infinite radius of curvature would necessarily define a linear, not circular, surface.

Independent Claim 19 recites, among other things, that "[a] socket shell tapers toward a pole of the shell in a region on either side of [a] line of contact in such a manner that a radius of curvature in the region is greater than the spherical radius of the outer surface of said socket insert." Applicant respectfully submits that this claim is allowable over the cited references for reasons similar to those discussed above. Claims 20-25 depend from amended Claim 19 and are therefore likewise allowable over Serbousek, not only because they depend from an allowable base claim, but also because each of these claims recites a unique combination of features, not taught or suggested by the cited art.

Rejection of the Claims As Double Patenting

Claims 5-25 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 9-28 1 of U.S. Pat. App. No. 12/296,796. As the Examiner has not yet indicated allowable subject matter in either application, Applicant respectfully requests that the provisional rejection be held in abeyance.

New Claims

Claims 26-29 have been added. Applicant respectfully submits that these claims are allowable not only because they depend from an allowable base claim, but also because each of these claims recites a unique combination of features, not taught or suggested by the cited art.

Claims 30-35 have also been added. Applicant respectfully submits that these claims are allowable for reasons similar to those discussed above. For example, Serbousek does not disclose a socket shell that defines an accommodating space, "at least a portion of the accommodating space [being] in the form of a straight circular cone, the straight circular cone having a cone angle between about 4 degrees and about 10 degrees," as recited, among other features, in new claim 28. No new matter has been added by any of the added claims.

CONCLUSION

For at least the forgoing reasons, the Applicant believes that the pending claims are in condition for immediate allowance.

Applicant respectfully submits that any remarks in support of patentability of one claim should not be imputed to any other claim, even if similar terminology is used. Any remarks referring to only a portion of a claim should not be understood to base patentability on that portion or that the limitation discussed is essential or critical; rather, patentability must rest on each claim taken as a whole. Applicant respectfully traverses each of the Office Action's rejections and each of the Office Action's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although changes to the claims have been made, no acquiescence, disclaimer or estoppel is intended or should be implied thereby; such amendments are made only to expedite prosecution of the present application and are without

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[1] The rejections of Claims 13 and 18 appear to rely on the rejection of Claim 5.

prejudice to the presentation or assertion, in the future, of claims relating to the same or similar subject matter. Applicant may not have presented in all cases, all arguments concerning whether the applied references can be properly combined or modified in view of the deficiencies noted above, and Applicant reserves the right to later contest whether the cited references can be properly combined or modified.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Co-Pending Applications of Assignee

Applicant wishes to draw the Examiner's attention to the following co-pending applications of the present application's assignee.

Docket No.	**Serial No.**	**Title**	**Filed**
	12/293,705	ACETABULAR CUP ASSEMBLY FOR MULTIPLE BEARING MATERIALS	9/19/2008
MEISS71.040APC	12/296,796	JOINT SOCKET AND HIP ENDOPROSTHESIS HAVING THE SAME	5/18/2009

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: September 10, 2010

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AMEND

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